REMARKS

This response is in reply to the Office Action dated July 15, 2003, paper number 9 (the Office Action). Claims 16-17 and 41 are amended for clarification. Reconsideration of the pending claims is respectfully requested in view of these remarks.

Claimed invention

Embodiments of the invention make it easy for someone who has color blindness to select a color-compensated display setting. An original signal is modified by pre-established color-compensating schemes that have been particularly selected for their ability to provide as much contrast as possible for people having different types of color blindness. The original signal and one or more modified signals can be simultaneously shown on a display and a viewer given an ability to select the signal that provides the most contrast. After selecting the preferred choice, the selected signal is then used as the regular signal for the display.

Thus, using embodiments of the invention, people who are color blind can quickly and easily select a color-adjusted signal that is appropriate for them, without having make difficult and complex color corrections.

Claim 1

The Examiner combines Yui (5,677,741), Ueda (5,986,642), and Atkinson (5,589,898) in rejecting claim 1 under 35 USC 103. Atkinson was known and cited by the Applicant.

This rejection fails to make a prima facie case for obviousness (under MPEP 2143 et. seq) because not all of the features of claim 1 are taught in the references. Thus, the applicant respectfully disagrees with the rejection, and the claim is allowable.

Specifically, paragraph 4 of the Office Action states that Atkinson "Teaches color remapping that are non-modifiable by a user (automatic adjustment) of the video system."

However, Atkinson specifically allows a user to adjust his color palette. As discussed on Column 6, lines 30-35 of Atkinson:

> **The point of these steps is for the system and method of the present invention to give the user several opportunities to modify**

the suggested palette as he chooses, rather than to dictate a new palette to him.

Thus, Atkinson does not provide "a plurality of separate color point remappings that are non-modifiable by a user of the video system" as recited in claim 1, because Atkinson specifically allows adjustment of the color palette by the user. For instance, with reference to column 6, lines 44-46 and to FIG. 3D of Atkinson --

The user will be presented with the option to accept, decline or adjust the color palette determined by the computer at step 53.

Thus, Atkinson specifically has steps, for example 53 and 61 of FIG. 3D, that allow the user to make a palette adjustment. For these and other reasons, Atkinson does not teach "a plurality of separate color point remappings that are non-modifiable by a user," as recited in claim 1.

Embodiments of the invention make it easy for a user to select a useful color palette, where the prior art had previously made it difficult (and time consuming) to select an alternate color palette. Atkinson, in contrast, does not make it easy for a user to select a color palette. For instance, Atkinson asks its users to perform a large series of tests to modify the color palette:

Test 1:	CUT test	Atkinson Column 4, lines 11-17
Test 2:	Ishihara test	Column 4, lines 45-52
Test 3:	Vanishing Design	Column 5, lines 12-23
Test 4:	Hidden digit design test	Column 5, lines 26-33
Test 5:	Classification design test	Column 5, lines 26-33
Test 6:	AO-HRR test	Column 5, lines 34-38
Test 7:	Vanishing Design Screen	Column 6, lines 45-50

Thus, if a user were looking for a simple palette choice, a user of Atkinson's system would easily get frustrated and quit long before finishing all of Atkinson's tests.

Embodiments of the invention, conversely, make it relatively easy for a user to simply select a preferred of the one or more pre-defined color remappings.

Claim 3

With reference to claim 3, the Office Action states that Yui teaches ordered sets of samples for a first color adjustment "predefined for a first type of color blindness." However, in Yui's system, no such samples are pre-defined. Instead, as taught in Column 3, lines 58-62

of Yui, the user "turns on a custom registration button" and generates his or her own "custom table data." Therefore, the color adjustment of Yui is not pre-defined for a type of color blindness, but rather allows the user to custom-generate his or her own table data.

Claim 12

Claim 12 includes the feature of "generating an adjusted signal from the reference color signal according to a tested transform associated with a tested type of color blindness, the transform non-modifiable by a user of the display." The Examiner asserts that Atkinson teaches this feature, however the applicant disagrees.

As described above with reference to Claim 1, Atkinson allows the user to make many types of adjustments to the transform, and the transform is thus modifiable by a user.

Thus, the Examiner has failed to make a prima facie case for obviousness with reference to claim 12, and the applicants respectfully request the claim to be allowed.

Claim 14

Claim 14 had previously been indicated as allowed, but is now being rejected under 35 USC 102(b) to Yui. The applicants respectfully disagree.

In rejecting this claim, the Examiner specifically leaves out important portions of the claim text that are not shown by Yui. For instance, Paragraph 7 of the office action states that element 77 of FIG. 7 of Yui teaches "generating an adjusted signal from the original color signal according to a first transform associated with a first type of color blindness by looking up in a memory an adjusted value corresponding to the original value."

However, element 77 of FIG. 7 does not include a transform associated with a first type of color blindness. Indeed, there has been no showing of a color-blindness transform in Yui.

Any color transform taught by Yui is designated by the user himself or herself, and is not "associated with a first type of color blindness." For instance, Column 3, lines 16-17 of Yui teaches "First a user generates and registers color conversion table data customized for himself or herself" (emphasis added). Thus, any color transformation in Yui is supplied by the user, and does not use any pre-defined "transform associated with a first type of color blindness", as recited in claim 14.

Paragraph 7 of the Office Action also states that FIG. 4, element 7 of Yui teaches "selecting a first type of color blindness." This assertion is not understood because element 7

of FIG. 4 is a controller, and the Examiner has not shown that there is any discussion of color blindness associated with the controller 7.

Paragraph 7 of the Office Action also states that Figures 5A -5C of Yui teach "characterizing the selected type of color blindness with respect to the coordinates as at least one discernible region in the color space." This assertion also fails because there is no discussion of color blindness with reference to the color space of Yui (FIGs 5A, 5B, and 5C). These figures simply illustrate how the user can change colorspace when the host color space and the display color space do not match in size. Specifically, with reference to FIG. 5C, when the host color space is greater than the display color space, the excess color space is clipped to fit within the display color space. Thus, Yui fails to teach this element of Claim 14 as well.

For these and other reasons, it is respectfully submitted that the Examiner has failed to show that Yui teaches all of the features of claim 14, and this claim should be allowed.

Claim 38

Claim 38 includes features not found in Yui, upon which the Examiner relies in rejecting claim 38 under 35 USC 102.

For instance, claim 38 includes the feature of "relating the selected type of color blindness to the coordinates of the reference color space to define a discernable region for the selected type of color blindness." Embodiments of the invention provide for this process by, as illustrated in FIG. 7 of the specification, mapping a discernible range D of a deuteranope onto the set of coordinates on which a normal "N" range of discernability is also mapped.

Yui makes no such mapping. As discussed above, FIGs 5A-5C of Yui are specifically directed to the range of image processing equipment, (Yui, Column 4, line 40- Column 5, line 11). No color-blindness relations are made in the cited portions of Yui. Thus, Yui does not teach the elements of claim 38, and the claim is allowable.

Claim 42

Claim 42 is dependent on claim 38 and specifically describes "relating the second type of color blindness to the coordinates of the reference color space to define a second discernable region." Embodiments of the invention provide for this process by, as illustrated in FIG. 8 of the specification, mapping the segment S into the reference color space.

However, Yui fails to map even one selected type of color blindness into the reference color space, much less mapping the two types of color blindness that claim 42 demands. Thus, Yui does not teach the limitations of claim 42, and the claim is allowable.

Dependent claims

The remainder of the dependent claims were also rejected by the Examiner. However, as described above, these claims are allowable due to their dependence on an allowable independent claim, and based on the recitations within each of the dependent claims. For instance, claim 3 includes a recitation of a first color gamut adjustment predefined for a first type of color blindness. This feature, along with those of claim 1 does not appear in Yui nor elsewhere in the prior art. All of the dependent claims are likewise allowable, and the applicants respectfully request their allowance.

For the foregoing reasons, reconsideration and allowance of all of the pending of the application as amended is solicited. The Examiner is encouraged to telephone the undersigned at (503) 222-3613 if it appears that an interview would be helpful in advancing the case.

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Respectfully submitted,

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Date: November 17, 2003

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